

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (currently amended) A method for inducing interferon β production in a mammalian cell, the method comprising introducing, to a cell in which a Toll-like receptor 3 is expressed, a vector containing a gene encoding a protein that binds to the Toll-like receptor 3, the protein comprising the amino acid sequence set forth in SEQ ID NO:2 or the amino acid sequence from position 394 to position 532 of the amino acid sequence set forth in SEQ ID NO: 2 ~~A cell comprising a vector containing a gene encoding a protein made of an amino acid sequence set forth in SEQ ID NO: 2 or amino acid sequence ranging from 394 position to 532 position in the amino acid sequence set forth in SEQ ID NO: 2, wherein a Toll-like receptor 3 is expressed in the cell.~~
2. (currently amended) ~~A cell~~ The method as set forth in Claim 1, wherein the cell is a human fibroblast, a human dendritic cell, a human intestinal epithelial cell, or a mouse fibroblast.
3. (currently amended) A screening method for a compound for inhibiting binding of a Toll-like receptor 3 and ~~[[the]]~~ a protein comprised of the amino acid sequence set froth in SEQ ID NO:2 or the amino acid sequence from position 394 to position 532 in the amino acid sequence set forth in SEQ ID NO:2, the method comprising ~~the steps of:~~
causing a candidate compound to be in contact with ~~[[the]]~~ a cell comprising a vector containing a gene encoding the protein, wherein the Toll-like receptor 3 is expressed; ~~as set forth in Claim 1~~ and
checking whether the protein and the Toll-like receptor 3 bind to each other or not.
4. (currently amended) A therapeutic method for treating cancer, the method comprising enhancing interferon β production by administering a cell including a vector containing a gene encoding a protein comprising the amino acid sequence set forth in SEQ ID NO:2

or the amino acid sequence from position 394 to position 532 in the amino acid sequence set forth in SEQ ID NO:2, wherein a Toll-like receptor 3 is expressed agent for treating a disease that is able to be ameliorated by enhancing Type I interferon production, the therapeutic agent containing the cell as set forth in Claim 4.

Claim 5 (canceled)

6. (currently amended) The therapeutic method [[agent]] as set forth in Claim 4 [[5]], wherein the cancer is hepatoma, kidney cancer, juvenile pharynx, papilloma villous tumor, malignant lymphoma, cerebral tumor, glioblastoma, medulloblastoma, astrocytoma, or dermal malignant melanoma.

Claims 7-8 (canceled)

9. (currently amended) A therapeutic method for treating cancer, comprising enhancing interferon β production by administering agent for treating a disease that is able to be ameliorated by enhancing Type I interferon production, the therapeutic agent containing a vector containing a gene encoding a protein comprising the made of an amino acid sequence set forth in SEQ ID NO: 2 or the amino acid sequence from position 394 to position 532 ranging from 394-position to 532-position in the amino acid sequence set forth in SEQ ID NO: 2, wherein a Toll-like receptor 3 is expressed in the cell.

Claims 10-26 (canceled)

27. (currently amended) The method as set forth in Claim 1, wherein the gene has A gene as set forth in Claim 25 having the nucleotide base sequence set forth in SEQ ID NO: 1 from position 1242 to position 1658 ranging from 1242 to 1658 bases.

Claims 28-32 (canceled)

33. (currently amended) [[A]] An isolated protein comprised of the ~~made of an amino acid sequence from position 394 to position 532 ranging from 394 position to 532-~~ position in SEQ ID NO: 2, wherein proline at position 434 ~~position~~ is replaced with histidine, and having a property of specifically binding to mammalian Toll-like receptor 3 but abnormality in a property of inducing ~~type-I~~ interferon β production.

34. (currently amended) [[A]] An isolated gene encoding the protein as set forth in Claim 33.

35. (previously presented) A recombinant expression vector having a gene as set forth in Claim 34.

36. (previously presented) A transformant cell transformed with a recombinant expression vector as set forth in Claim 35.

37. (new) A method for inhibiting interferon β production in a mammalian cell, the method comprising introducing, to a cell in which a Toll-like receptor 3 is expressed, a vector containing a gene encoding a protein that binds to the Toll-like receptor 3, the protein comprising the amino acid sequence from position 394 to position 532 of the amino acid sequence set forth in SEQ ID NO: 2, wherein proline at position 434 is replaced with histidine.